

**REPORT**  
**OF THE**  
**DEPARTMENT OF HEALTH**  
**OF THE**  
**PANAMA CANAL**  
**FOR THE**  
**MONTH OF SEPTEMBER, 1916**

---

**D. C. HOWARD**

Lieut. Colonel, Medical Corps, United States Army,  
Chief Health Officer, Balboa Heights, Canal Zone

---

*Gift of the Panama Canal Museum*

**WASHINGTON**  
**1916**



**REPORT**  
**OF THE**  
**DEPARTMENT OF HEALTH**  
**OF THE**  
**PANAMA CANAL**  
**FOR THE**  
**MONTH OF SEPTEMBER, 1916**

---

**D. C. HOWARD**

**Lieut. Colonel, Medical Corps, United States Army,  
Chief Health Officer, Balboa Heights, Canal Zone**

---

**WASHINGTON**

**1916**



# CONTENTS.

	Page.
Letter of transmittal.....	5
General remarks.....	5
Vital statistics:	
Health of employees.....	5
Health of residents of the Canal Zone.....	6
Health of residents of the city of Panama.....	7
Health of residents of the city of Colon.....	7
Hospital division:	
Ancon Hospital.....	8
Board of health laboratory.....	8
Insane department.....	8
Chronic ward.....	8
Colon Hospital.....	9
Palo Seco Leper Asylum.....	9
Santo Tomas Hospital.....	9
District dispensaries.....	9
Sanitary division:	
Canal Zone.....	10
Panama.....	10
Colon.....	12
Quarantine division:	
Balboa-Panama.....	12
Colon-Cristobal.....	12
Statistical tables:	
Table I. Admissions, deaths and noneffective rates for employees; deaths of residents of Panama, Colon, and the Canal Zone...	13
II. Deaths by age, color and sex.....	15
III. Deaths by nationality.....	15
IV. Deaths of white Americans.....	16
V. Causes of deaths of employees.....	16
VI. Causes of deaths of civil population (employees and nonem- ployees) and military, and places where chargeable.....	17
VII. Admissions and deaths in the hospitals of the Panama Canal..	20
VIII. Consolidated hospital report.....	32
IX. Consolidated dispensary and admission report.....	34
X. Employees: Constantly sick and noneffective rates per 1,000..	35
XI. Employees: Days' treatment per admission, hospital and quarters.....	36
XII. Financial statement.....	36
XIII. Ancon Hospital.....	38
XIV. Colon Hospital.....	44
XV. Palo Seco Leper Asylum.....	45
XVI. Santo Tomas Hospital.....	45
XVII. Sanitary work done in the Canal Zone, Panama, and Colon....	48
XVIII. Quarantine transactions.....	50
XIX. Issues of quinine.....	51
XX. Personnel report.....	52



## LETTER OF TRANSMITTAL.

---

THE PANAMA CANAL, CANAL ZONE,  
HEALTH DEPARTMENT,  
*Balboa Heights, October 10, 1916.*

Lieut. Col. CHESTER HARDING,  
*Acting Governor, The Panama Canal,  
Balboa Heights, Canal Zone.*

SIR: I have the honor to submit the following report of the operations of the department of health for the month of September, 1916.

Very respectfully,

D. E. HOWARD,  
*Chief Health Officer.*

### GENERAL REMARKS.

The general health of employees and nonemployees in the Canal Zone and the terminal cities has continued good.

A few cases of mild diphtheria appeared in the terminal cities, but with early isolation and segregation of contacts the disease has been kept localized, and the number of new cases is decreasing.

No disease of a quarantinable nature originated on or was brought to the Isthmus during the month.

### VITAL STATISTICS.

#### EMPLOYEES.

The following statistics are based upon the number of names appearing on the rolls for the preceding month, which was 33,528.

The total number of admissions to hospitals and quarters was 732, a rate of 261.99,<sup>1</sup> as compared with 282.06 for the preceding month and 307.34 for the corresponding month of last year.

The total number of deaths from all causes was 13; of these 10 were from disease, giving a death rate of 3.58, as compared with 2.86 for the preceding month and 4.82 for the corresponding month of last year.

The constantly noneffective rate was 8.88, as compared with 8.06 for the preceding month and 10.35 for the corresponding month of last year.

---

<sup>1</sup>All morbidity and mortality rates are computed as equivalent annual per 1,000.



The total admission rate for malaria, hospitals and quarters, was 13.95, as compared with 29.99 for the preceding month and 53.41 for the month of September last year. The constantly noneffective rate for malaria was 0.67, as compared with 1.13 for last month and 1.33 for the corresponding period of last year.

The diseases causing the highest admission rates to hospital, in the order of their numerical importance, were: (1) Diseases of the digestive system, (2) malaria, (3) venereal diseases, (4) diseases of the respiratory system, and (5) nonvenereal diseases of the genito-urinary system. These five classes of diseases caused 45 per cent of all admissions to hospital. Eleven per cent of all admissions to hospital were caused by malaria.

There were two admissions for typhoid fever during the month, giving a rate of 0.72, as compared with 0.36 for the month of August. There were no admissions of employees for typhoid during September, 1915.

#### EFFECTS OF RACE.

The admission rate to hospital and the death rate from disease for black employees were 69.94 and 2.89, respectively, as compared with 99.98 and 3.31 for last month and 126.28 and 5.56 for the corresponding month of last year. For white employees the admission rate to hospital and the death rate from disease were 222.33 and 7.94, respectively, as compared with 228.79 and 0.00 for the preceding month and 283.85 and 0.00 for the corresponding month of last year.

The constantly noneffective rates were 13.68 for whites and 8.12 for blacks.

The admission rate to hospitals and quarters for malaria was 12 for blacks and 26.47 for whites, as compared with a rate of 26.03 for blacks and 55.23 for whites for last month, and 43.68 for blacks and 117.18 for whites for the corresponding month of last year.

There were two deaths among American employees during the month, one from disease and one from external causes, giving a rate of 5.73, as compared with 2.63 for last month and 0.00 for the month of September last year.

The admission rate to hospitals from disease was 180.34 for Americans, as compared with 177.16 for last month and 214.69 for the corresponding month of last year.

#### DEPORTATIONS.

There were two deportations accomplished during the month, one employee and one nonemployee, both for disease.

#### CANAL ZONE.

##### EMPLOYEES AND NONEMPLOYEES.

The population of the Canal Zone, according to the last police census taken in June, 1916, is 31,048. This includes employees, nonemployees, and military garrisons, residing or stationed within the Canal Zone limits. Among this population there were 34 deaths



during the month of September, 28 of which were from disease, giving a death rate of 10.82, as compared with 8.12 for the preceding month and 12.31 for the corresponding month of last year.

Of the total deaths from disease the percentage under 5 years of age was 54, as compared with 48 for last month.

There were 52 births reported, giving a rate of 20.10; of these 19 were white and 33 colored.

There were 14 deaths of children under 1 year of age, all colored, giving an infant mortality rate, based upon the number of births reported during the month, of 0.00 for white and 424 for colored children, with a general average of 269.

The percentage of stillbirths to total births was 4.

## PANAMA CITY.

### EMPLOYEES AND NONEMPLOYEES.\*

The population of the city is 60,778, among whom there were 160 deaths during the month of September; of these 152 deaths were from disease, giving a rate of 30.01, as compared with 28.43 for the preceding month and 32.79 for the corresponding month of last year.

Of the total deaths from disease the percentage under 5 years of age was 51 as against 61 for last month.

The principal causes of death as compared with last month were as follows:

	August.	September.
Tuberculosis (all classes).....	24	31
Diarrhea and enteritis (under 2 years).....	35	26
Broncho-pneumonia.....	9	16

There were 277 births reported, giving a rate of 54.61. There were 59 deaths under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 213.

The percentage of stillbirths to total births was 8.

## COLON.

### EMPLOYEES AND NONEMPLOYEES.

The population of the city is 24,693, among whom there were 67 deaths during the month of September; of these 64 deaths were from disease, giving a rate of 31.10, as compared with 26.73 for the preceding month and 21.27 for the corresponding month of last year.

Of the total deaths from disease the percentage under 5 years of age was 48 as compared with 38 for the preceding month.

The principal causes of death as compared with last month were as follows:

	August.	September.
Broncho-pneumonia.....	4	15
Tuberculosis (all classes).....	9	8
Bright's disease (chronic nephritis).....	3	4

There were 65 births reported, giving a rate of 31.58. There were 23 deaths under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 354.

The percentage of stillbirths to total births was 6.

## DIVISION OF HOSPITALS.

### ANCON HOSPITAL.

The average number of patients constantly in the hospital proper during the month was 470, as compared with 453 for last month and 455 for the corresponding month of last year. The average number of days' treatment per employee was 20.94. The daily per capita cost per patient in the hospital proper was \$1.49 gross, for August.

The construction work on the new hospital buildings is progressing satisfactorily.

There were 62 cases of malaria admitted to hospital during September as against 124 for August and 143 for July.

Seventeen cases of dengue were admitted during September as against two for last month, the majority coming from Empire on the west side of the Canal.

Detailed statistics are shown in Table XIII.

*Board of health laboratory.*—During the month of September the following work in addition to routine was performed at the laboratory: (1) Continuation of the mosquito census inaugurated last September; (2) study has been continued as to the best method of modifying the physical properties of petroleum so that its efficiency as a larvacide may be increased.

*Corozal Hospital (insane).*—The average number of patients constantly cared for during the month was 301, as compared with 290 for last month and 252 for the corresponding month of last year. During the month there were 24 admissions, 8 deaths, 5 discharges, and 1 transfer. One patient was deported during the month. The daily per capita cost for August was \$0.42 gross.

The new concrete addition to the piggery and the new chicken house are nearing completion. Plans are under way for remodeling the hospital kitchen.

*Chronic ward.*—During the month of September there were no admissions, deaths, or discharges; one patient was transferred to the hospital proper for ward treatment. The average number of patients constantly cared for was 19.67. The daily per capita cost per patient for August was \$0.30.

## COLON HOSPITAL.

The average number of patients constantly in hospital was 33, as compared with 34 for the preceding month and 44 for the corresponding month of last year. The average number of days' treatment per employee was 7.46. The daily per capita cost per patient for August was \$2.42 gross.

Demolition of the old ward buildings is in progress. The old operating pavilion has been turned over to the Quarantine Station for use as a detention ward for suspects.

Detailed statistics are shown in Table XIV.

## PALO SECO LEPER ASYLUM.

The average number of patients constantly cared for during the month was 69.30, as compared with 67.58 for the preceding month, and 57 for the corresponding month of last year. During September there were two admissions, no deaths, and no discharges. The daily per capita cost per patient for August was \$0.83 gross.

The installation of the new water supply has been completed, and an ample supply of good quality has been obtained.

The new ward building is practically completed. The construction of an additional ward has been authorized and work will be begun soon.

Detailed statistics are shown in Table XV.

## SANTO TOMAS HOSPITAL.

One thousand three hundred and eighty-two patients were treated in the hospital during the month of September, as compared with 1,439 for the preceding month, and 1,351 for the corresponding month of last year. The daily average number of patients treated was 447, as compared with 440 for last month and 454 for the month of September last year. The total number of days' treatment was 13,418, as compared with 13,717 for the preceding month.

The number of deaths was 80, with tuberculosis, organic disease of the heart, and congenital debility the chief causes in the order named. Thirteen cases of dysentery were treated with no deaths, and 8 cases of pneumonia, with one death. No cases of typhoid were treated during the month.

Detailed statistics are shown in Table XVI.

## DISTRICT DISPENSARIES.

The dispensary having the highest admission rate for malaria was Gatun, with an average weekly percentage of 0.33; that having the lowest was Paraiso, with a weekly percentage of 0.015.

Detailed statistics are shown in Table IX.

## SANITATION.

## CANAL ZONE.

The several districts of the zone are in good sanitary condition, and the beneficial results of the permanent work—consisting of concreting ditches and installing tile drains—during the past dry season is manifest. The heavy rains have made it possible to determine where additional drains are required, and the laying of tile is in progress in all the districts. Hydraulic fills are being made at Paraiso, and in the flats between Ancon and Corozal.

The hydraulic fill immediately north of the Balboa railroad station, which was made two years ago, has given very little trouble from breeding mosquitoes until recently. Experience of past years has been repeated in connection with this fill; with the appearance of vegetation on the fill, both culex and anopheles have been found and the area now requires careful attention.

As noted under "Vital Statistics," the malaria rate has been reduced about one-half as compared with last year.

A number of cases of dengue have appeared at the military posts on the west side of the canal. In connection with the transmission of dengue by culex fatigans, it is interesting to note in this connection the following figures showing the number of mosquitoes caught in barracks at the several posts during the month.

	Culex caught.	Total number caught.
Camp Otis.....	37	5,992
Camp at Empire.....	4	743
Camp Gaillard.....	29	4,903

The number of anopheles caught are in all cases less than the number of culex, and almost the entire catch at all of these posts consist of mansonia. If the continued appearance of cases of dengue in this vicinity affords an opportunity to do so, it is proposed to take steps to determine whether mansonia are transmitting dengue.

The following communicable diseases were reported during the month:

Chickenpox.....	4	Puerperal septicemia.....	1
Diphtheria.....	4	Pneumonia.....	2
Dysentery.....	2	Tuberculosis (any organ).....	6
Malaria.....	52	Typhoid fever.....	4
Measles.....	5	Whooping cough.....	4
Mumps.....	1		

## PANAMA.

During the month 3 admissions to Ancon Hospital and 16 admissions to Santo Tomas Hospital for malaria were reported from the city of Panama, making a total of 19 cases. During the same month of 1915 there were 21 admissions and during September, 1914,

168 admissions to both hospitals for this disease. There were no deaths reported due to malaria.

During September there were 10 cases of diphtheria reported or discovered by this office, no deaths resulting. In the infected houses extensive culture taking was carried on, which resulted in detection of 4 "carriers," these being isolated.

A systematic examination of water from the various wells remaining in and about the city was undertaken. The report from the examining physiologist indicates that many of the wells are contaminated, and steps will have to be taken toward affording a safer water supply for our suburbanites. Where city water supply is available wells are being closed. Seven such wells were closed by construction of concrete tops.

*Storage of cocabola.*—Cocabola is a hardwood capable of taking a bright polish, and is brought to Panama from the interior in billets or slabs and stored at the various lumber yards. In the past there has been an active market existing for this wood, consequently it did not remain in storage, but was constantly moved and handled, and therefore no nuisances were encountered at these lumber piles. Recently on account of the dullness of the market there has been less demand for this wood, consequently the piles here in the city have remained undisturbed. Inspection showed that active stegomyia breeding was going on in the knot holes and other natural concavities of the wood, which were holding rain water, and it was also discovered that a considerable amount of rat harborage existed under these piles.

These conditions are being met by causing the owners of this lumber to erect roofs over their cocabola stock and to place all the billets on reinforced concrete bases having a curtain wall extending 18 inches into the ground. This prevents the collection of water to form mosquito-breeding places, and the burrowing of rats is eliminated by the curtain wall.

*Garbage service.*—The collection of all garbage in the city is now being carried on during daylight hours, the wagons starting on Central Avenue and covering the principal streets in the shopping districts during the early morning. The balance of the city is then covered during the rest of the day.

The garbage-wagon drivers have been furnished with whistles with which they can warn janitors of buildings of their approach. This prevents the necessity of all garbage cans being placed on the sidewalk hours before the approach of the wagons, and reduces this nuisance to a minimum.

Every effort is being made to keep all garbage cans covered, except during the short time they are on the sidewalk as the wagons come up. A large number of wooden covers have been made during the past few weeks, and they are being sent out through the city as fast as possible.

It is hoped that in the course of a few weeks the garbage service will be reorganized and on a more satisfactory basis than it has been at any time in the past, as its collection during the daytime tends toward much more efficient work than when done at night.



As a result of this change considerable saving in cost has been effected, and it has been possible to extend the service over parts of the city heretofore not covered.

The following infectious diseases were reported to this office during the month:

Beriberi.....	3	Mumps.....	2
Chickenpox.....	18	Pellagra.....	2
Diphtheria.....	10	Pneumonia.....	10
Dysentery.....	12	Tuberculosis (any organ).....	23
Malarial fever.....	19	Whooping cough.....	3
Measles.....	11	Yaws.....	1
Meningitis.....	4		

#### COLON.

The activities of the health department have been along the usual lines during the month, with gratifying results, especially as regards the incidence of malaria. The extensive work being done in connection with the filling of swamps—both hydraulic fills and dry fills—will render it practicable to limit the breeding of mosquitoes in the future.

The following communicable diseases were reported during the month:

Chickenpox.....	1	Measles.....	3
Diphtheria.....	8	Pneumonia.....	13
Dysentery.....	1	Typhoid fever.....	1
Malarial fever.....	14		

#### QUARANTINE SERVICE.

On the Pacific side the number of arrivals, particularly from infected ports, has shown an increase during the month. An increase in the number of fumigations and supplementary inspections was also a notable feature. Plague and yellow fever conditions along the west coast of South America have shown no improvement during the month.

On the Atlantic side, all passengers under 16 originating in New York City were closely observed during transit and upon their arrival, and temperatures taken twice daily, to eliminate the possibility of poliomyelitis gaining an entrance to the Isthmus. Twenty-four suspects were detained at the quarantine station for observation during the month, all proving negative for the disease.

An increased number of inspections of crews on outgoing steamers has been made in order to prevent desertion by members of the crew and to make provisions for deportation of deserters when discovered.

A number of new wooden floats have been provided for the breasting off of ships from plague ports, and it is thought that the number is now sufficient for all purposes.

Supervision has been maintained over the inspection of animals at the abattoir during the month, and condemnations of meat have been made in accordance with Federal meat-inspection regula-

tions. Following is a report concerning anthrax in cattle of the supply department during September:

Total number of cattle on hand at close of business Aug. 31 .....	1,719
Total number of cattle received during September .....	1,414
Total number of cattle on hand Sept. 30 .....	2,266
Total number of cattle on pastures during September .....	3,133
Number of cattle slaughtered at Cristobal abattoir .....	841
Number of deaths from anthrax in field .....	0
Number of anthrax cases found at abattoir .....	0
Number of deaths from other causes .....	126

TABLE I.—ADMISSIONS, DEATHS, AND NONEFFECTIVE RATES FOR EMPLOYEES; DEATHS OF RESIDENTS OF PANAMA, COLON, AND THE CANAL ZONE.

ABSOLUTE NUMBERS.

	Number of employees.	Admissions to hospitals.			Deaths.			Noneffective from sickness.	
		Total.	Disease.	External causes.	Total.	Disease.	Causes.	Days treated.	Constantly non-effective.
<i>September, 1916.</i>									
White.....	4,534	100	84	16	4	3	1	1,860	62.01
Colored.....	28,994	251	169	82	9	7	2	7,067	235.57
Total.....	33,528	351	253	98	13	10	3	8,927	297.58
<i>August, 1916.</i>									
White.....	4,563	109	87	22	1	.....	1	2,135	68.88
Colored.....	29,046	317	242	75	9	8	1	6,266	202.13
Total.....	33,609	426	329	97	10	8	2	8,401	271.01
<i>September, 1915.</i>									
White.....	4,608	128	109	19	.....	.....	.....	2,885	96.17
Colored.....	30,219	403	318	85	18	14	4	7,929	264.29
Total.....	34,827	531	427	104	18	14	4	10,814	360.46

<sup>1</sup> Of these deaths, 23 were cattle old, emaciated, and unprofitable, slaughtered for hides; 3 injured in transportation.



TABLE I.—ADMISSIONS, DEATHS, AND NONEFFECTIVE RATES FOR EMPLOYEES; DEATHS OF RESIDENTS OF PANAMA, COLON, AND THE CANAL ZONE—Continued.

PROPORTIONATE NUMBERS.<sup>1</sup>

	Number of employees.	Admission to hospitals.			Deaths.			Noneffective from sickness.	
		Total.	Disease.	External causes.	Total.	Disease.	Causes.	Days treated.	Constantly non-effective.
September, 1916.									
White.....	4,534	264.67	222.33	42.35	10.59	7.94	2.65	.....	13.68
Colored.....	28,994	103.88	69.94	33.93	3.72	2.89	.83	.....	8.12
Total.....	33,528	125.63	90.55	35.08	4.65	3.58	1.07	.....	8.88
August, 1916.									
White.....	4,563	286.65	228.79	57.86	2.63	.....	2.63	.....	15.10
Colored.....	29,046	130.96	99.98	30.98	3.72	3.31	.41	.....	6.96
Total.....	33,609	152.10	117.47	34.63	3.57	2.86	.71	.....	8.06
September, 1915.									
White.....	4,608	333.33	283.85	49.48	.....	.....	.....	.....	20.87
Colored.....	30,219	160.03	126.28	33.75	7.14	5.56	1.58	.....	8.75
Total.....	34,827	182.96	147.13	35.83	6.20	4.82	1.38	.....	10.35

<sup>1</sup> Annual average per 1,000.

TABLE I.—DEATHS OF RESIDENTS OF THE CITIES OF PANAMA, COLON, AND THE CANAL ZONE—Continued.

Place.	Popu- lation.	Deaths.			Annual average per 1,000.		
		Total.	Dis- ease.	Exter- nal. causes.	Total.	Dis- ease.	Exter- nal causes.
<i>September, 1916.</i>							
Panama.....	60,778	160	152	8	31.59	30.01	1.58
Colon.....	24,693	67	64	3	32.56	31.10	1.46
Canal Zone.....	31,048	34	28	6	13.14	10.82	2.32
Total.....	116,519	261	244	17	26.88	25.13	1.75
<i>August, 1916.</i>							
Panama.....	60,778	148	144	4	29.22	28.43	.79
Colon.....	24,693	56	55	1	27.21	26.73	.48
Canal Zone.....	31,048	25	21	4	9.66	8.12	1.54
Total.....	116,519	229	220	9	23.59	22.66	.93
<i>September, 1915.</i>							
Panama.....	60,373	172	165	7	34.18	32.79	1.39
Colon.....	29,331	54	52	2	22.09	21.27	.82
Canal Zone.....	30,219	33	31	2	13.10	12.31	.79
Total.....	119,923	259	248	11	25.92	24.82	1.10

TABLE II.—DEATHS BY AGE, COLOR, AND SEX.

	White.			Colored.			Yellow.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year.....	5	3	8	52	33	85	.....	2	2	57	38	95
1 to 4 years.....	1	3	4	11	14	25	.....	1	1	12	18	30
5 to 10 years.....	.....	1	1	4	1	5	.....	.....	.....	4	2	6
11 to 20 years.....	2	.....	2	5	2	7	.....	.....	.....	7	2	9
21 to 30 years.....	7	1	8	18	20	38	2	.....	2	27	21	48
31 to 40 years.....	4	.....	4	13	14	27	.....	.....	.....	17	14	31
41 to 50 years.....	2	1	3	11	9	20	1	.....	1	14	10	24
51 to 60 years.....	3	.....	3	4	5	9	.....	.....	.....	7	5	12
61 to 70 years.....	2	.....	2	.....	2	2	.....	1	1	2	3	5
71 to 80 years.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
Total.....	27	9	36	118	100	218	3	4	7	148	113	261

TABLE III.—DEATHS BY NATIONALITY, SEPTEMBER, 1916.

	Employees.		Nonemployees.		Total.		Grand Total.
	Male.	Female.	Male.	Female.	Male.	Female.	
Antigua.....	.....	.....	2	2	2	2	4
Barbados.....	4	.....	21	16	25	16	41
China.....	.....	.....	3	4	3	4	7
Colombia.....	2	.....	6	3	8	3	11
England.....	.....	.....	.....	1	.....	1	1
France.....	.....	.....	1	.....	1	.....	1
Grenada.....	.....	.....	5	.....	5	.....	5
Guadeloupe.....	.....	.....	2	.....	2	.....	2
Haiti.....	.....	.....	1	.....	1	.....	1
Jamaica.....	5	.....	31	39	36	39	75
Martinique.....	.....	.....	1	3	1	3	4
Montserrat.....	.....	.....	1	1	1	1	2
Nassau.....	.....	.....	1	1	1	1	2
Panama.....	.....	.....	44	34	44	34	78
Porto Rico.....	.....	.....	1	.....	1	.....	1
St. Lucia.....	.....	.....	3	4	3	4	7
St. Vincent.....	.....	.....	1	1	1	1	2
Spain.....	.....	.....	2	2	2	2	4
Trinidad.....	.....	.....	2	.....	2	.....	2
Venezuela.....	.....	.....	1	.....	1	.....	1
United States.....	2	.....	4	2	6	2	8
Unknown.....	.....	.....	2	.....	2	.....	2
Total.....	13	.....	135	113	148	113	261

TABLE IV.—DEATH RATE AMONG AMERICANS ON THE ISTHMUS CONNECTED WITH THE PANAMA CANAL.

	Number of deaths.	Annual average per 1,000.
White employees from the United States (4,192):		
Disease.....	1	2.86
External causes.....	1	2.86
Total.....	2	5.72
White women and children from the United States (3,864):		
Disease.....	1	3.11
External causes.....	1	3.11
Total.....	2	6.22
White employees and their families from the United States (8,056):		
Disease.....	2	2.98
External causes.....	2	2.98
Total.....	4	5.96
Total number of Americans on the Canal Zone, including soldiers and their families (16,470):		
Disease.....	2	1.46
External causes.....	5	3.64
Total.....	7	5.10

TABLE V.—CAUSES OF DEATHS OF EMPLOYEES OF THE PANAMA CANAL AND PANAMA RAILROAD COMPANY.

	White.	Colored.	Total.
<i>* Disease.</i>			
Tuberculosis of the lungs.....	1	1	2
Lobar pneumonia.....	1	2	3
Cerebral apoplexy.....	1		1
Pyæmia, streptococcic.....		1	1
Sarcoma of left hip and other structures.....		1	1
Typhoid fever.....		1	1
<i>External causes.</i>			
Drowning, accidental.....		1	1
Homicide by firearms.....	1		1
Electric shock.....		1	1
Total.....	4	8	12

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES), AND MILITARY AND PLACES WHERE CHARGEABLE.

Disease.	Pan-ama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>General diseases.</i>									
Typhoid fever.....					1		1		1
Malarial fever, estivoa-utumnal.....						1	1		1
Diphtheria and croup.....				1			1		1
Dysentery, entamoebic.....	1						1		1
Erysipelas.....	1						1		1
Pyemia.....			1				1		1
Septicemia.....		1					1		1
Pellagra.....		3	1	1	1	1	2	5	7
Tuberculosis of the lungs.....	11	10	4	2		2	15	14	29
Acute military tuberculosis.....	2		1				3		3
Tuberculosis meningitis.....	1						1		1
Disseminated tuberculosis.....	3	4		1			3	5	8
Syphilis, tertiary.....		1					1		1
Syphilis, hereditary.....		1					1		1
Syphilis, period not stated.....				1			1		1
Cancer and other malignant tumors of the buccal cavity.....	1						1		1
Cancer and other malignant tumors of the stomach and liver.....	1						1		1
Cancer and other malignant tumors of the female genital organs.....		1						1	1
Cancer and other malignant tumors of other organs and of organs not specified.....	1				1		2		2
Acute articular rheumatism.....	1						1		1
Diabetes.....					1		1		1
Anemia, secondary, cause not determined.....	1						1		1
Simple meningitis.....		1						1	1
Cerebro spinal fever.....	1	1					1	1	2
Cerebral hemorrhage, apoplexy.....	1	1	1				2	1	3
Paralysis without specified cause.....				1				1	1
Other forms of mental alienation.....				1				1	1
Convulsions of infants (under 5 years of age).....	1						1		1
Other diseases of the nervous system.....						1		1	1
Tumor of the brain.....		1						1	1
<i>Diseases of the circulatory system.</i>									
Pericarditis.....	1						1		1
Acute endocarditis.....					1	1	1	1	2
Malignant endocarditis.....				1				1	1
Organic diseases of the heart.....	4	2	2	2			6	4	10
Aneurysm.....	2						2		2
Arterio sclerosis.....	1						1		1
Embolism and thrombosis.....				1				1	1
<i>Diseases of the respiratory system.</i>									
Acute bronchitis.....	2	1	1	2	1	1	3	5	8
Chronic bronchitis.....	1		1				2		2
Broncho pneumonia.....	9	7	8	7	2	1	19	15	34

TABLE VI.—CAUSES OF DEATH OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES), AND MILITARY AND PLACES WHERE CHARGEABLE—Continued.

Disease.	Pan-ama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Pneumonia, unqualified.....	1	3	.....	.....	.....	.....	1	3	4
Lobar pneumonia.....	4	1	3	.....	1	2	8	3	11
Pulmonary congestion, pulmonary apoplexy.....	.....	.....	.....	1	.....	.....	.....	1	1
Abscess of lungs.....	.....	.....	1	.....	.....	.....	1	.....	1
<i>Diseases of the digestive system.</i>									
Diseases of the esophagus.....	.....	1	.....	.....	.....	.....	.....	1	1
Other diseases of the stomach, cancer excepted.....	.....	1	.....	.....	.....	.....	.....	1	1
Diarrhea and enteritis (under 2 years).....	17	9	3	.....	1	3	21	12	33
Colitis.....	.....	1	.....	.....	1	1	1	2	3
Diarrhea and enteritis (2 years and over).....	1	.....	.....	1	.....	.....	.....	1	2
Intestinal obstruction.....	1	.....	.....	.....	.....	.....	1	.....	1
Other diseases of the intestines.....	1	.....	.....	.....	.....	.....	1	.....	1
Cirrhosis of the liver.....	.....	1	.....	.....	.....	.....	.....	1	1
Simple peritonitis (nonpuerperal).....	.....	2	.....	.....	.....	.....	.....	2	2
<i>Nonvenereal diseases of the genito-urinary system and annexa.</i>									
Acute nephritis.....	2	1	1	.....	.....	.....	3	1	4
Bright's disease (chronic nephritis).....	4	.....	2	2	1	.....	7	2	9
Other diseases of the kidney and annexa.....	2	.....	.....	.....	.....	.....	2	.....	2
Diseases of the bladder.....	1	.....	.....	.....	.....	.....	1	.....	1
<i>The puerperal state.</i>									
Puerperal hemorrhage.....	.....	1	.....	.....	.....	.....	.....	1	1
Eclampsia.....	.....	1	.....	1	.....	.....	.....	2	2
<i>Diseases of the bones and of the organs of locomotion.</i>									
Diseases of the bones (tuberculosis excepted).....	.....	1	.....	.....	.....	.....	.....	1	1
<i>Diseases of early infancy.</i>									
Premature birth.....	3	1	.....	1	1	.....	4	2	6
Congenital debility.....	1	.....	.....	.....	.....	.....	1	.....	1
Atrophy of infants.....	.....	.....	.....	1	.....	.....	.....	1	1
Malnutrition.....	.....	3	2	.....	.....	.....	2	3	5
Other causes peculiar to early infancy.....	2	.....	.....	.....	.....	.....	2	.....	2
Lack of care.....	.....	.....	1	.....	.....	.....	1	.....	1
<i>Affections produced by external causes.</i>									
Suicide by hanging or strangulation.....	.....	.....	.....	.....	1	.....	1	.....	1
Burns (conflagration excepted).....	.....	.....	.....	.....	.....	1	.....	1	1
Accidental drowning.....	3	.....	1	.....	3	.....	7	.....	7

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES), AND MILITARY AND PLACES WHERE CHARGEABLE—Continued.

Disease.	Panama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Traumatism by fall.....			1				1		1
Traumatism by other crushings (vehicles, railroads, etc.).....	1						1		1
Homicide by firearms.....	3				1		4		4
Homicide by other means.....			1				1		1
Other external violence.....		1						1	1
<i>Ill-defined diseases.</i>									
Cause of death not specified or ill defined.....		3	1	2		1	1	6	7
Total.....	94	66	36	31	18	16	148	113	261
Stillbirths.....	13	8	3	1	1	1	17	10	27
Grand total.....	107	74	39	32	19	17	165	123	288

## DEATHS OF NONRESIDENTS SEPTEMBER, 1916.

Residence.	Nationality.	Color.	Sex.	Age.	Diagnosis.
Interior of Panama.	Colombia..	Black...	Male....	25	Tuberculosis, laryngeal and pulmonary.
Do.....	St. Lucia...	do.....	do.....	43	Pulmonary tuberculosis.
Do.....	Chile.....	do.....	do.....	34	Sarcoma of superior maxilla and cranium.
Steamship Grunewald.	Germany..	White....	do.....	45	Drowning, accidental.
Interior of Panama.	Jamaica....	Black...	Female..	2	Tubercular meningitis.
Do.....	Panama....	do.....	Male....	49	Pulmonary tuberculosis.
Steamship La Maria	St. Lucia...	do.....	do.....	60	Edema of lungs.
Steamship Chile....	Chile.....	do.....	do.....	26	Drowning, accidental.
Steamship Cetriana	England...	White....	do.....	43	Abscess of the liver.

TABLE VII.—ADMISSIONS AND DEATHS IN HOSPITALS

Diseases.	Employees.											
	Admissions.						Deaths.					
	White.				Black.	White.				Black.		
	Ameri- cans.		Euro- peans.			Ameri- cans.		Euro- peans.				
	M.	F.	M.	F.		M.	F.	M.	F.			
<i>General diseases.</i>												
Typhoid fever.....					2						1	
Malaria.....	5	1	3		23							
Malarial fever, estivoau- tumnal.....					3							
Malarial fever, clinical.....					2							
Malarial fever, cachexia.....												
Measles.....					1							
Whooping cough.....												
Diphtheria and croup.....					1							
Influenza.....	2		1		3							
Dysentery, entamoebic.....												
Erysipelas.....												
Dengue.....	1											
Chickenpox.....					5							
Yaws.....			1									
Pyæmia.....					1						1	
Pellagra.....												
Tuberculosis of the lungs.....					4				1			
Acute miliary tuberculosis.....												
Pott's disease.....			1									
Tuberculosis of bones and joints.....			1									
Tuberculosis of the lymph glands.....					1							
Disseminated tuberculosis.....					1							
Syphilis, primary.....			1		3							
Syphilis, secondary.....			1		2							
Syphilis, tertiary.....					12	1						
Syphilis, hereditary.....												
Syphilis, period not stated.....					1							
Gonococæis infection.....												
Gonorrhea.....					10							
Gonorrheal orchitis and epididymitis.....												
Gonorrheal ophthalmia.....					1							
Soft chancre.....	2											
Adenitis chancroidal.....												
Cancer and other malignant tumors of the female geni- tal organs.....												
Cancer and other malignant tumors of other organs and of organs not specified.....											1	
Other tumors (tumors of the female organs ex- cepted).....	1				1							





TABLE VII.—ADMISSIONS AND DEATHS IN HOSPITALS

Diseases.	Employees.											
	Admissions.						Deaths.					
	White.				Black.	White.				Black.		
	Ameri- cans.		Euro- peans.			Ameri- cans.		Euro- peans.				
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.
<i>General diseases—Contd.</i>												
Scurvy.....												
Purpura hemorrhagica.....												
Alcoholism (acute or chronic).....	2											
Alcoholism acute.....												
<i>Diseases of the nervous system and of the organs of special sense.</i>												
Encephalitis.....												
Lateral sclerosis.....												
Softening of the brain.....												
Paralysis without specified cause.....					1							
General paralysis of the insane.....					5							
Other forms of mental alienation.....					1							
Dementia precox.....												
Chorea.....												
Hysteria.....												
Neuralgia.....					1							
Neuritis.....	1				1							
Tumor of the brain.....	1											
Neurasthenia.....	1				4							
Trachoma.....	2				1							
<i>Diseases of the circulatory system.</i>												
Pericarditis.....												
Acute endocarditis.....												
Malignant endocarditis.....	1		1		1						1	
Embolism and thrombosis.....					1							
Diseases of the veins (varices, hemorrhoids, phlebitis, etc.).....	2		2		1							
Varices.....			1									
Phlebitis.....					1							
Diseases of the lymphatic system (lymphangitis, etc.).....					2							
Lymphadenitis (nonvenereal).....			1		1						1	





## OF THE PANAMA CANAL FOR SEPTEMBER, 1916—Continued.

Nonemployees.										Nonresidents.										Total admissions.	Total deaths.
Admissions.					Deaths.					Admissions.					Deaths.						
W.			B.		W.			B.		W.		B.		W.		B.					
Sol-d'rs.	Others.				Sol-d'rs.	Others.				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
M.	M.	F.	M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.				
8	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...				
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
3	5	3	2	3	...	...	...	...	...	...	...	...	...	...	...	22	...				
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...				
...	...	...	2	1	...	...	...	2	1	...	...	...	...	...	...	3	3				
2	1	1	3	1	...	...	...	2	1	...	...	...	...	...	...	12	6				
1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	8	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...				
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	4	...				
7	5	6	...	5	...	...	...	...	...	...	...	...	...	...	...	28	...				
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1				
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...				
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...				
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...				
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...				
1	...	2	...	1	...	...	...	1	1	...	...	...	...	...	...	4	...				
...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	3	2				
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...				
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...				
2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	6	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...				
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	10	...				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...				
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...				

TABLE VII.—ADMISSIONS AND DEATHS IN HOSPITALS

[illegible]





TABLE VII.—ADMISSIONS AND DEATHS IN HOSPITALS

Diseases.	Employees.											
	Admissions.						Deaths.					
	White.				Black.	White.				Black.		
	Ameri- cans.		Euro- peans.			Ameri- cans.		Euro- peans.				
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.
<i>The puerperal state—Contd.</i>												
Other accidents of labor.....												
Eclampsia.....												
Puerperal diseases of the breast.....												
<i>Diseases of the skin and of the cellular tissue.</i>												
Furuncle.....	1											
Acute abscess.....					4							
Phlegmon and cellulitis.....	3				2							
Ulcer of the skin.....					1							
Impetigo contagiosa.....	1											
Ingrowing nail.....												
Other diseases of the skin and annexa.....												
<i>Diseases of the bones and of the organs of locomotion.</i>												
Diseases of the bones (tu- berculosis excepted).....	1		1									
Inc. periostitis.....	1											
Diseases of the joints (tu- berculosis and rheuma- tism excepted).....												
Arthritis.....	1				1							
Amputations.....					4							
Other diseases of the organs of locomotion.....	1				1							
<i>Malformations.</i>												
Congenital malformations (stillbirth not included).....					2							
<i>Diseases of early infancy.</i>												
Newborn child.....												
Premature birth.....												
Malnutrition.....												
<i>Affections produced by ex- ternal causes.</i>												
Poisoning by food.....	1				2							
Other acute poisonings.....	1											
Venomous bites and stings.....					1							

## OF THE PANAMA CANAL FOR SEPTEMBER, 1916—Continued.

[illegible]

TABLE VII.—ADMISSIONS AND DEATHS IN HOSPITAL

Diseases.	Employees.											
	Admissions.						Deaths.					
	White.				Black.	White.				Black.		
	Ameri- cans.		Euro- peans.			Ameri- cans.		Euro- peans.				
	M.	F.	M.	F.		M.	F.	M.	F.		M.	F.
<i>Affections produced by external causes—Continued.</i>												
Burns (conflagration ex- cepted).....	1				3							
Traumatism by firearms.....	1											
Traumatism by cutting or piercing instruments.....	1		2		4							
Traumatism by fall.....					7							
Traumatism in mines and quarries.....					1							
Traumatism by machines.....	1				3							
Traumatism by other crush- ings (vehicles, railroads, landslides, etc.).....	1				15							
Railroad traumatism.....	1											
Heat exhaustion.....												
Fractures (cause not speci- fied).....	1		2		8							
Dislocations.....					1							
Sprains.....					4							
Other external violence.....	2		1		33							
<i>Ill-defined diseases.</i>												
Ill-defined organic disease.....												
Infections of undetermined origin.....					4							
No disease.....					1							
Total.....	71	3	26		249	2			2		7	



TABLE VIII.—CONSOLIDATED

[A=White Americans. F=White

	Remaining Sept. 1.			Admitted.			Died.		
	A.	F.	B.	A.	F.	B.	A.	F.	B.
<b>ANCON HOSPITAL.</b>									
Panama Canal employees.....	20	11	150	55	15	159	.....	2	2
Panama Railroad employees.....	5	2	64	5	2	34	.....		2
Panama pay patients.....						1	.....		1
Other pay patients.....	121	35	68	305	32	129	2	2	25
Charity patients.....	9	1	34	22	2	19	.....		5
Total.....	155	49	316	387	51	342	2	4	35
<i>Insane department.</i>									
Panama Canal employees.....		1	2			4	.....		
Panama Railroad employees.....			2			1	.....		
Panama pay patients.....	2	26	182		1	9	.....		4
Other pay patients.....	2	4	3	3	1		.....		1
Charity patients.....	3	8	59			5	.....		2
Total.....	7	39	248	3	2	19	.....		7
Grand total.....	162	88	564	390	53	361	2	4	42
<i>Corozal farm.</i>									
Panama Canal employees.....		10	51		2	3	.....		
<i>Chronic ward.</i>									
Charity patients.....			20				.....		
<b>COLON HOSPITAL.</b>									
Panama Canal employees.....	3	1	7	10	5	16	.....		1
Panama Railroad employees.....			9	4	4	37	.....		2
Panama pay patients.....						7	.....		2
Other pay patients.....	4	2	2	12	11	2	.....		
Charity patients.....	2			5	2	2	.....		
Total.....	9	3	18	31	22	64	.....		5
<b>PALO SECO LEPER ASYLUM.</b>									
Panama pay patients.....		2	38			2	.....		
Charity patients.....		2	26				.....		
Total.....		4	64			2	.....		
<b>GRAND TOTAL.</b>									
Panama Canal employees.....	23	23	210	65	22	182	.....	2	3
Panama Railroad employees.....	5	2	75	9	6	72	.....		4
Panama pay patients.....	2	28	220		1	19	.....		7
Other pay patients.....	121	41	73	320	44	131	2	2	26
Charity patients.....	14	11	139	27	4	26	.....		7
Total.....	171	105	717	421	77	430	-2	4	47

## HOSPITAL REPORT.

foreign. B=Blacks.]

Discharged.			Transferred.			Remaining Sept. 30.			Average number constantly sick.			
A.	F.	B.	A.	F.	B.	A.	F.	B.	American.	Foreign.	Black.	Total.
63	13	192	.....	.....	2	12	11	113	17.97	12.27	134.06	164.30
7	3	52	.....	.....	1	3	1	43	3.47	1.47	53.23	58.17
325	40	120	1	1	1	98	24	51	119.20	26.40	66.30	211.90
23	3	17	.....	.....	4	8	.....	27	8.80	1.16	25.97	35.93
418	60	381	1	1	8	121	36	234	149.44	41.30	279.56	470.30
.....	1	1	.....	.....	.....	.....	.....	5	.....	.60	3.57	4.17
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	3.30	3.30
.....	.....	.....	.....	.....	1	2	27	186	2.00	26.47	184.50	212.97
1	.....	.....	.....	.....	.....	4	5	2	1.36	4.73	2.67	8.76
.....	2	.....	.....	.....	.....	3	8	60	3.00	8.90	59.50	71.40
1	1	3	.....	.....	1	9	40	256	6.36	40.70	253.54	300.60
419	61	384	1	1	9	130	76	490	155.80	82.00	533.10	770.90
.....	2	1	.....	.....	2	.....	10	51	.....	9.86	49.07	58.93
.....	.....	.....	.....	.....	1	.....	.....	19	.....	.....	19.67	19.67
11	6	12	1	.....	3	1	.....	7	2.56	.96	4.41	7.93
2	2	31	.....	.....	2	2	2	11	1.33	.56	13.17	15.06
.....	.....	2	.....	.....	2	.....	.....	1	.....	.....	.60	.60
13	9	2	.....	2	1	3	2	1	3.07	1.96	1.03	6.06
6	1	.....	.....	1	1	1	.....	1	1.76	.56	.61	2.93
32	18	47	1	3	9	7	4	21	8.72	4.04	19.82	32.58
.....	.....	.....	.....	.....	.....	.....	2	40	.....	2.00	39.30	41.30
.....	.....	.....	.....	.....	.....	.....	2	26	.....	2.00	26.00	28.00
.....	.....	.....	.....	.....	.....	.....	4	66	.....	4.00	65.30	69.30
74	22	206	1	.....	7	13	21	176	20.53	23.69	191.11	235.33
9	5	83	.....	.....	3	5	3	57	4.80	2.03	69.70	76.53
.....	.....	2	.....	.....	3	2	29	227	2.00	28.47	224.40	254.87
339	49	122	1	3	2	105	31	54	123.63	33.09	70.00	226.72
29	4	19	.....	1	6	12	10	133	13.56	12.62	131.75	157.93
451	80	432	2	4	21	137	94	647	164.52	99.90	686.96	951.38

Number of employees remaining in hospitals:

White..... 42

Black..... 233

Total..... 275

TABLE IX.—CONSOLIDATED DISPENSARY REPORT.

E employees treated in quarters, and all cases treated but not excused.

## EMPLOYEES TREATED IN QUARTERS.

Station.	Remain- ing Sept. 30.		Ad- mitted.		Died.		Dis- charged.		Trans- ferred.		Remain- ing Sept. 30.		Days lost.		
	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	Total.
Ancon.....			86	12			81	8	2	1	3	3	150	72	222
Balboa.....	4		86	15			86	5	1	9	3	1	222	48	270
Pedro Mi- guel.....	2		10				12						31		31
Paraiso.....	1		10	4			9	3	2	1			26	5	31
Gamboa.....			1	1			1	1					1	1	2
Gatun.....		2	15	4			15	6					23	19	42
Colon.....	7	13	91	71			88	62			10	22	173	570	743
Total.....	14	15	299	107			292	85	5	11	16	26	626	715	1,341

## ALL CASES TREATED BUT NOT EXCUSED.

Station.	Employees.			Nonemployees.			Total.		
	White.	Black.	Total.	White.	Black.	Total.	White.	Black.	Total.
Ancon.....	2,666	4,074	6,740	1,954	2,927	4,881	4,620	7,001	11,621
Balboa.....	3,383	3,723	7,106	976	858	1,834	4,359	4,581	8,940
Pedro Miguel..	746	1,123	1,869	855	241	1,096	1,601	1,364	2,965
Paraiso.....	880	3,036	3,916	697	994	1,691	1,577	4,030	5,607
Gamboa.....	63	194	257	42	438	480	105	632	737
Gatun.....	298	1,340	1,638	595	1,175	1,770	893	2,515	3,408
Colon.....	855	3,363	4,218	914	869	1,783	1,769	4,232	6,001
Total.....	8,891	16,853	25,744	6,033	7,502	13,535	14,924	24,355	39,279

## CONSOLIDATED ADMISSION REPORT.

	White.	Black.	Total.
Total admissions to hospitals, excluding Corozal farm and chronic ward.....	496	427	923
Total admissions of employees to quarters.....	299	107	406
Total.....	795	534	1,329
Less number of patients transferred between hospitals and from quarters to hospitals, whose admissions are duplicated in above figures.....	11	29	40
Net admissions to hospitals and quarters.....	784	505	1,289



TABLE IX.—CONSOLIDATED DISPENSARY REPORT—Continued.  
CONSOLIDATED ADMISSION REPORT—Continued.

	White.	Black.	Total.
<b>EMPLOYEES.</b>			
Employees admitted to hospitals.....	100	251	351
Employees admitted to quarters.....	299	107	406
Total.....	399	358	757
Less number transferred between hospitals, and from quarters to hospitals, whose admissions are duplicated in above figures.....	6	19	25
Net admissions of employees to hospital and quar- ters.....	393	339	732
Annual average per thousand of admissions of employees to hospitals and quarters.....	1,040.14	140.30	261.99

CONTAGIOUS AND INFECTIOUS DISEASES REPORTED, SEPTEMBER, 1916.

Disease.	Panama.	Colon.	Canal Zone.	Total.
Beriberi.....	3			3
Chicken pox.....	18	1	4	23
Diphtheria.....	10	8	4	22
Dysentery.....	12	1	2	15
Malarial fever.....	19	14	52	85
Measles.....	11	3	5	19
Meningitis.....	4			4
Mumps.....	2		1	3
Pellagra.....	2			2
Puerperal septicemia.....			1	1
Pneumonia.....	10	13	2	25
Tuberculosis (any organ).....	23		6	29
Typhoid fever.....		1	4	5
Whooping cough.....	3		4	7
Yaws.....	1			1

TABLE X.—NUMBER OF EMPLOYEES CONSTANTLY SICK IN  
HOSPITALS AND QUARTERS.

	White.	Colored.	Total.
<b>Hospitals:</b>			
Ancon Hospital.....	35.76	194.17	229.93
Colon Hospital.....	5.42	17.57	22.99
Total.....	41.18	211.74	252.92
<b>Quarters:</b>			
Ancon.....	5.00	2.40	7.40
Balboa.....	7.40	1.60	9.00
Pedro Miguel.....	1.00		1.00
Paraiso.....	.86	.17	1.03
Gamboia.....	.03	.03	.06
Gatun.....	.77	.63	1.40
Colon.....	5.77	19.00	24.77
Total.....	20.83	23.83	44.66

TABLE X.—NUMBER OF EMPLOYEES CONSTANTLY SICK IN HOSPITALS AND QUARTERS—Continued.

	Hos- pitals.	Quar- ters.	Total.
Average number of employees constantly sick:			
White.....	41.18	20.83	62.01
Colored.....	211.74	23.83	235.57
Total.....	252.92	44.66	297.58
Average number of employees constantly sick per 1,000:			
White.....	9.08	4.60	13.68
Colored.....	7.30	.82	8.12
Total.....	7.55	1.33	8.88

TABLE XI.—AVERAGE LENGTH OF STAY IN HOSPITALS OR QUARTERS FOR EACH ADMISSION OF SICK EMPLOYEE.

	White.	Black.	Total.
Hospitals:			
Ancon Hospital.....	22.26	20.50	20.94
Colon Hospital.....	4.95	8.54	7.46
Quarters:			
Ancon.....	1.63	2.78	1.74
Balboa.....	2.83	2.23	2.75
Pedro Miguel.....	2.92		2.92
Paraiso.....	2.45	1.25	2.13
Gamboa.....	1.00	1.00	1.00
Gatun.....	1.53	.35	2.10
Colon.....	2.08	11.48	5.97

TABLE XII.—FINANCIAL STATEMENT.

	August, 1916.	July, 1916.	August, 1915.
Administration: Chief health office.....	\$567.28	\$792.97	\$873.67
Hospital division:			
Ancon Hospital.....	26,104.63	25,742.20	25,313.83
Board of health laboratory.....	1,916.01	1,440.96	1,687.68
Corozal farm.....	6,216.38	6,143.71	5,714.64
Chronic ward.....	183.39	202.35	179.53
Colon Hospital.....	4,292.20	3,803.60	3,785.91
Palo Seco Leper Asylum.....	1,665.69	1,691.10	3,123.82
Santo Tomas Hospital.....	1,136.48	866.63	900.28
Medical storehouse.....	653.16	930.17	937.73
Reserve for new tools.....	2,154.69	835.80	.....
	44,322.63	41,656.52	41,643.42

TABLE XII.—FINANCIAL STATEMENT—Continued.

	August, 1916.	July, 1916.	August, 1915.
District dentists.....	45.43	91.21	4.05
Dispensaries:			
Naos Island.....			174.92
Balboa.....	1,195.21	1,028.61	1,242.15
Corozal.....			626.98
Pedro Miguel.....	443.20	500.47	491.73
Paraiso.....	587.82	595.63	717.98
Gamboa.....	88.50	151.00	161.38
Gatun.....	575.14	623.07	792.33
Toro Point.....			9.30
	2,935.30	2,989.99	4,220.83
Sanitary division:			
General inspector.....	50.00	50.00	50.00
Health office, Panama.....	3,654.55	3,338.25	3,708.90
Street cleaning.....	<sup>1</sup> 4,290.43	4,254.49	4,331.17
Health office, Colon.....	<sup>2</sup> 2,987.65	2,680.64	2,655.04
Street cleaning.....	2,175.90	2,101.29	2,200.97
	13,158.53	12,424.67	12,946.08
Zone sanitation:			
Ancon.....	2,091.89	2,196.93	242.16
Balboa.....	1,712.86	1,413.51	168.36
Corozal.....	658.11	2,072.61	1,041.72
Pedro Miguel.....	5,251.26	3,965.59	3,983.88
Culebra.....			12.00
Frijoles.....	76.13	70.01	100.85
Gatun.....	4,057.67	4,130.88	2,255.18
Cristobal-Mount Hope.....	2,290.10	2,393.27	2,376.11
	29,296.55	28,667.47	23,126.34
Quarantine division:			
Chief quarantine office.....	188.35	170.87	200.33
Balboa-Panama.....	2,041.12	1,912.00	1,893.17
Colon-Cristobal.....	3,234.99	3,182.57	3,012.95
	5,464.46	5,265.44	5,106.45
RECAPITULATION.			
Chief health office.....	567.28	792.97	873.67
Hospital division.....	44,322.63	41,656.52	41,643.42
Dispensaries.....	2,935.30	2,989.99	4,220.83
Sanitary division.....	29,296.55	28,667.47	23,126.34
Quarantine division.....	5,464.46	5,265.44	5,106.45
	82,586.22	79,372.39	74,970.71

<sup>1</sup> \$3,166.67 per month charged to Republic of Panama for garbage disposal and street cleaning.

<sup>2</sup> One-half expense of garbage disposal and street cleaning, Colon, charged to Republic of Panama.

TABLE XIII.—ANCON HOSPITAL.  
REPORT OF NATIONALITY OF PATIENTS TREATED.

	Total number treated.	American.		Other nations.	
		White.	Black.	White.	Black.
Hospital:					
Panama Canal employees.....	410	75	1	26	308
Panama Railroad employees.....	112	10	1	4	97
Panama Government employees.....	1	.....	.....	.....	1
Other pay patients.....	690	426	.....	67	197
Charity patients.....	87	31	.....	3	53
Total.....	1,300	542	2	100	656
Asylum:					
Panama Canal employees.....	6	.....	.....	1	5
Panama Railroad employees.....	5	.....	.....	.....	5
Panama Government employees.....	220	2	.....	27	191
Other pay patients.....	13	5	.....	5	3
Charity patients.....	74	3	.....	9	62
Total.....	318	10	.....	42	266
Grand total.....	1,618	552	2	142	922
Soldiers.....	300	300	.....	.....	.....
Chronics.....	20	.....	.....	.....	20
Farm (cripples).....	66	.....	.....	12	54

REPORT OF DAYS LOST IN HOSPITAL.

Hospital:					
Panama Canal employees.....	4,929	539	.....	368	4,022
Panama Railroad employees.....	1,745	104	.....	44	1,597
Other pay patients.....	6,357	3,576	.....	792	1,989
Charity patients.....	1,078	264	.....	35	779
Total.....	14,109	4,483	.....	1,239	8,387
Asylum:					
Panama Canal employees.....	125	.....	.....	18	107
Panama Railroad employees.....	99	.....	.....	.....	99
Panama Government employees.....	6,389	60	.....	794	5,535
Other pay patients.....	263	41	.....	142	80
Charity patients.....	2,142	90	.....	267	1,785
Total.....	9,018	191	.....	1,221	7,606
Grand total.....	23,127	4,674	.....	2,460	15,993
Soldiers.....	2,626	2,626	.....	.....	.....
Chronics.....	590	.....	.....	.....	590
Farm (cripples).....	1,768	.....	.....	296	1,472

Average cost per subsistence per day, \$0.2722.

TABLE XIII.—ANCON HOSPITAL.

## WARD LABORATORY REPORT.

Blood examinations (total number).....	493
Estivo-autumnal.....	53
Tertian.....	9
Differential counts.....	6
Hemoglobelin estimations.....	170
Leucocyte counts.....	57
Red blood counts.....	1
Stool examinations (total number).....	1,152
Ameba.....	2
Ascaris lumbricoides.....	3
Cercomonas intestinalis.....	2
Ciliated monads.....	1
Gualac tests.....	5
Pus and blood.....	21
Strongloides.....	4
Tenia saginata dispar (ova).....	4
Tricocephalus dispar.....	9
Uncinaria (ova).....	24
Urine examinations (total number).....	1,950
Albumen.....	383
Bile.....	21
Casts.....	446
Ciliated monads.....	3
Epitholia.....	1,067
Gualac tests.....	18
Indicon.....	106
Pus.....	617
Pus and blood.....	172
Sugar (positive 1, negative 130).....	131
Acetone vaginalis (positive).....	1
Sputum examinations (total number).....	301
Positive for tubercle bacilli.....	8
Smear examinations (total number).....	12
Urethral.....	7
Vaginal.....	2
Eye.....	3
Spinal fluid.....	5
Albumin estimations.....	9

## REPORT OF SURGICAL OPERATIONS.

	Number.	Died.
Amputations:		
Shoulder.....	1	.....
Leg.....	1	.....
Operations on bones:		
Craniectomy, decompressive.....	1	.....
Plating of fractures, simple.....	2	.....
Adenectomy:		
Cervical.....	3	.....
Axillary.....	1	.....
Inguinal, single.....	8	.....
Inguinal, double.....	6	.....
Femoral.....	2	.....
Herniotomy:		
Inguinal, single.....	8	.....
Inguinal, double.....	1	.....
Femoral.....	1	.....
Ventral.....	3	.....
Genitourinary tract:		
Urethrotomy, internal.....	1	.....
Urethrotomy, external.....	1	.....
Varicocele, radical cure.....	3	.....

TABLE XIII.—ANCON HOSPITAL—Continued.  
REPORT OF SURGICAL OPERATIONS—Continued.

	Number.	Died.
Genitourinary tract—Continued.		
Hydrocele, single, radical cure.....	3	
Epididymotomy.....	16	
Curetage uteri.....	6	
Perineoplasty.....	1	
Vaginal punctures.....	1	
Obstetrical:		
Caesarian section, abdominal.....	3	1
Low forceps.....	1	
Perineorrhaphy.....	2	
Rectum:		
Hemorrhoids, radical cure.....	12	
Fistula in anus, excision of.....	2	
General:		
Thyroidectomy.....	1	
Varicose veins, excision of.....	2	
Tenorrhaphy.....	3	
Excision of surface neoplasms.....	3	
Skin graft.....	2	
Laparotomy:		
For tuberculous peritonitis.....	1	
For intestinal obstruction.....	1	
Exploratory.....	1	
Appendectomy.....	10	
Appendectomy with local peritonitis.....	3	
Cholecystectomy.....	2	
Abscess of liver, laparo-hepatotomy for.....	1	
Abscess of liver, thoraco-hepatotomy for.....	1	1
Pan-hysterectomy.....	1	
Supravaginal hysterectomy.....	5	
Hysteromyomectomy.....	8	
Salpingectomy, single.....	2	
Salpingectomy, double.....	1	
Salpingo-cophorectomy.....	2	
Ovarian cystectomy.....	1	
Suspensio-uteri.....	3	
Major operations, various other.....	2	1
Minor operations, various other.....	115	1
Total.....	261	4

## REPORT OF OPERATIONS, EYE AND EAR CLINIC.

Tonsillectomy.....	20
Adenoidectomy.....	12
Submucous resections.....	12
Turbinectomy.....	3
Pterygium excisions.....	2
Minor eye.....	1
Total.....	50
Refractions.....	98



TABLE XIII.—ANCON HOSPITAL—Continued.

## REPORT OF OUT-PATIENT DEPARTMENT.

Clinic.	Total visits.	New cases.	Pay cases.	Prescriptions.
Medical.....	278	160	23	293
Surgical.....	226	113	9	36
Eye and ear.....	558	161	1	50
Total.....	1,062	434	33	379

## MONTHLY VACCINATION REPORT.

No vaccinations during September.

## BOARD OF HEALTH LABORATORY—MONTHLY REPORT.

Bacteriological examinations of:	
Blood cultures (7 positive for B. Typhosus; 1 positive for streptococcus)...	19
Throat cultures.....	192
Urines.....	39
Stools.....	38
Sputum.....	2
Pathological fluids, exudates, etc.....	9
Smears, gonococcus.....	6
Culture of autopsies.....	1
Leper suspects.....	2
Dairy milk from Corozal.....	27
Miscellaneous.....	3
Wassermann reactions.....	733
Agglutination reactions.....	4
Autogenous vaccines prepared.....	3
Anti-typhoid vaccinations.....	1
Animal inoculations.....	5
Blood for malaria.....	1
Dark field examinations.....	14
Smallpox vaccine points manufactured.....	3,690
Chemical examinations of:	
Mothers' milk.....	1
Urine.....	8
Diesel engine oil.....	1
Spots on clothing (suit).....	1
Rosin.....	1
Lemon soda.....	1
Bevoe (near beer).....	1
Determination of cost of arsenical grass killer.....	1
Fat determinations of milk from Corozal Farm.....	5
Spinal fluids—	
Butyric acid test.....	21
Ammonium sulphate test.....	21
Phenol test.....	21
Colloidal gold test.....	14
Pathological tissues prepared; paraffin 287.....	287
Surgical tissues reported.....	57
Autopsies performed.....	33
Animals autopsied.....	24
Birds autopsied.....	1
Tapeworms examined.....	1
Rats examined (mus musculus, 608; mus norwegicus, 784; mus alexandrinus, 6; mus rattus, 171).....	1,569
Bodies embalmed.....	5
Interments at Corozal.....	16
Taken to Panama.....	3
Taken to Colon.....	2
Cremations.....	34

TABLE XIII.—ANCON HOSPITAL—Continued.

MOSQUITOES IDENTIFIED AT THE BOARD OF HEALTH LABORATORY.

Stations.	Anopheles, albianus.	Anopheles tarisaculata.	Anopheles pseudopunctipennis.	Anopheles malefactor.	Anopheles apicimacula.	Culex and allied genera.	Mansonia titillans.
Ancon.....						109	85
Balboa.....	1		1			11	459
Corozal post.....	28		1			22	436
Corozal district.....	4					2	102
Pedro Miguel.....	17					19	1,017
Pedro Miguel, railroad station.....	15					13	3,048
Paraiso.....	4					28	1,142
Red Tank.....	15						625
Miraflores.....	2					2	32
Rio Grande.....	1						1,607
Lirio and Cerro.....							804
Dredges, Culebra Cut.....	6					207	1,776
Tower R.....							32
Gamboa.....	12					7	3,979
Other places in Pedro Miguel district.....						7	28
Gatun.....	209	6		2		69	551
New Gatun.....	328	16		2	1	41	601
Frijoles.....	429	5				66	7,579
Monte Lirio.....	76					3	642
Barracks, Cristobal.....	29	6				3,114	102
Silver, married quarters.....	5	7				1,070	4
Mount Hope village.....	151	104		3		103	276
Colon Hospital.....	7	5			1	463	444
Panama Railroad cars, Cristobal.....	61	10				392	3
Other places in Colon-Cristobal district.....	6					483	1
Camp Gaillard.....	1					29	4,871
Empire.....						4	735
Camp Otis.....						37	5,992
Fort Randolph.....	83	68				8	62
Fort Sherman.....	24	5		1	1	419	4,375
Fort Grant.....						33	
Total.....	1,514	232	2	8	3	6,761	41,410

TABLE XIII.—ANCON HOSPITAL—Continued.

MOSQUITOES IDENTIFIED AT THE BOARD OF HEALTH LABORATORY—Continued

Stations.	<i>Mansonia fasciolatus.</i>	<i>Mansonia nigricans.</i>	<i>Stegomyia.</i>	<i>Aedes taeniorhynchus.</i>	<i>Wyeomyia.</i>	<i>Aedeomyia squamipennis.</i>	<i>Joblotia.</i>	Total.
Ancon.....			3	2	13			212
Balboa.....				1				473
Corozal post.....					1			488
Corozal district.....							1	109
Pedro Miguel.....							1	1,054
Pedro Miguel, railroad station.....								3,076
Paraiso.....								1,174
Red Tank.....								640
Miraflores.....						1		37
Rio Grande.....								1,608
Lirio and Cerro.....								804
Dredges, Culebra Cut.....			44					2,033
Tower R.....								32
Gamboa.....		2				1		4,001
Other places in Pedro Miguel district.....								35
Gatun.....	8				3			848
New Gatun.....	11				9			1,009
Frijoles.....	1	2			10			8,092
Monte Lirio.....		1						722
Barracks, Cristobal.....								3,251
Silver, married quarters.....			1					1,087
Mount Hope village.....	13		15		7			672
Colon Hospital.....		1	1					922
Panama Railroad cars, Cristobal.....	2	2						470
Other places in Colon-Cristobal district.....			1					491
Camp Gaillard.....							2	4,903
Empire.....					4			743
Camp Otis.....								6,029
Fort Randolph.....				1				222
Fort Sherman.....								4,825
Fort Grant.....				369				402
Total.....	35	8	65	373	47	2	4	50,464

## COROZAL HOSPITAL.

STATEMENT OF COMMITMENTS, DISCHARGES, AND DEATHS.

## COMMITMENTS.

	Male.	Female.
From Canal Zone, first admission.....	11	3
From Panama Government, first admission.....	3	7
Total.....	14	10

## COROZAL HOSPITAL—Continued.

## DISCHARGES.

	Well.		Improved.		Unimproved.	
	Male.	Female.	Male.	Female.	Male.	Female.
Barbados.....	2	.....	.....	.....	.....	.....
France.....	.....	.....	1	.....	.....	.....
Panama.....	.....	.....	.....	1	<sup>1</sup> 1	.....
U. S. A.....	.....	.....	.....	.....	<sup>2</sup> 1	.....
Total.....	2	.....	1	1	2	.....

<sup>1</sup> Transferred to Ancon Hospital for surgical treatment.<sup>2</sup> Deported to United States.

## DEATHS.

Medical diagnosis.	Mental diagnosis.	Male.	Female.
Broncho-pneumonia; epilepsy; tuberculosis.	Epilepsy.....	.....	1
Tuberculosis of lungs; tertiary syphilis; latent malaria.	Tertiary syphilis.....	1	.....
Cerebral sclerosis; arteriosclerosis...	Psychosis undifferentiated, catatonic.	.....	1
Pellagra.....	Dementia precox, catatonic.	.....	1
Intestinal obstruction.....	Dementia precox.....	<sup>1</sup> 1	.....
Perforating ulcer of the esophagus (noncancerous).	Syphilis, tertiary.....	.....	1
Lobar pneumonia.....	Arterio sclerotic dementia.	1	.....

<sup>1</sup> Died in Ancon Hospital.

TABLE XIV.—COLON HOSPITAL.

## NATIONALITY.

	White American.	White Foreign.	Black.	Total.
Panama Canal employees.....	13	6	23	42
Panama Railroad employees.....	4	4	46	54
Panama pay.....	.....	.....	7	7
Other pay.....	16	13	4	33
Charity cases.....	7	2	2	11
Total.....	40	25	82	147

TABLE XIV.—COLON HOSPITAL—Continued.

## LABORATORY REPORT.

Blood examinations.....	65
Estivo-autumnal.....	20
Tertian.....	2
Differential counts.....	7
White blood counts.....	5
Stool examinations.....	3
Ameba.....	1
Urine examinations.....	100
Albumen.....	41
Casts.....	14
Pus.....	5
Blood.....	3
Sugar.....	3
Sputum examinations.....	9
Positive for tubercle bacilli.....	1
Smear examinations.....	2
Positive for gonorrhea.....	2

## SURGICAL OPERATIONS.

Herniotomy:	
Inguinal, single.....	4
Inguinal, double.....	2
Genito-urinary tract: Varicocele, radical cure.....	1
Rectum: Hemorrhoids, radical cure.....	1
General: Extensive injuries to soft parts, operation for.....	1
Laparotomy:	
Appendectomy.....	1
Minor operations, various.....	5
Minor operations, various (dispensary).....	141

TABLE XV.—PALO SECO LEPER ASYLUM.

## NATIONALITY OF PATIENTS.

Class.	Number treated.		Americans.		Others.	
	White.	Black.	White.	Black.	White.	Black.
Pay cases.....	2	40	.....	.....	2	40
Charity cases.....	2	26	.....	.....	2	26
	4	66	.....	.....	4	66

Cost of subsistence, per patient, per day, \$0.225.

TABLE XVI.—SANTO TOMAS HOSPITAL.

Class.	Re- main- ing Sept. 1.	Ad- mitted.	Dis- charged.	Died.	Re- main- ing Sept. 30.
Pay cases.....	17	91	68	3	37
Charity cases.....	426	848	778	77	419
Total.....	443	939	846	80	456

Average number of patients constantly sick.....	447
Total number of days' treatment.....	13,418
Average number of days' treatment for each patient.....	6
Cost of subsistence per patient per day.....	\$0.39

TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.

## NATIONALITY.

Class.	Number treated.	Americans.		Other nations.	
		White.	Black.	White.	Black.
Pay cases.....	108	3	.....	37	68
Charity cases.....	1,274	9	.....	141	1,124
Total.....	1,382	12	.....	178	1,192

## DISPENSARY REPORT.

Class.	White.	Black.	Total.
Natives.....	18	748	766
Foreigners.....	49	319	368
Total.....	67	1,067	1,134

## DISEASES TREATED.

Malarial fever.....	60
Diphtheria and croup.....	6
Influenza.....	1
Dysentery.....	13
Leprosy.....	2
Erysipelas.....	1
Other epidemic diseases.....	10
Purulent infection and septicemia.....	12
Pellagra.....	3
Tuberculosis of the lungs.....	17
Rickets.....	1
Syphilis.....	45
Soft chancre.....	10
Gonococcus infection.....	44
Cancer and other malignant tumors of the female genital organs.....	1
Cancer and other malignant tumors of the breast.....	1
Cancer and other malignant tumors of organs not specified.....	4
Other tumors.....	5
Acute articular rheumatism.....	3
Alcoholism, acute or chronic.....	5
Other forms of mental alienation.....	7
Epilepsy.....	4
Hysteria.....	5
Neuralgia and neuritis.....	5
Other diseases of the eyes and their annexa.....	9
Acute endocarditis.....	1
Organic disease of the heart.....	25
Diseases of the arteries.....	3
Diseases of the veins.....	6
Diseases of the lymphatic system.....	15
Diseases of the nasal fossae.....	2
Chronic bronchitis.....	21
Broncho-pneumonia.....	6
Pneumonia.....	3
Pleurisy.....	7
Diseases of the pharynx.....	10
Diarrhea and enteritis (under 2 years).....	7
Diarrhea and enteritis (2 years and over).....	9
Ankylostomiasis.....	50



TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.

## DISEASES TREATED—Continued.

Intestinal parasites	5
Appendicitis and typhlitis	1
Hernias, intestinal obstructions	2
Diseases of the anus and fecal fistula	12
Other diseases of the intestines	3
Biliary calculi	1
Other diseases of the liver	1
Diseases of the spleen	3
Bright's disease	27
Diseases of the bladder	2
Diseases of the urethra	1
Nonvenereal diseases of the male genital organs	11
Uterine hemorrhage	2
Uterine tumor	6
Metritis	6
Other diseases of the uterus	12
Salpingitis and other diseases of the female genital organs	7
Normal labor	90
Accidents of pregnancy	25
Gangrene	1
Furuncle	1
Acute abscess	19
Other diseases of the skin and annexa	25
Diseases of the bones	2
Diseases of the joints	1
Other diseases of the organs of locomotion	1
Congenital malformations	4
Nurslings discharged from hospital without disease	85
Lack of care	1
Senility	1
Other acute poisonings	1
Burns	3
Traumatism by firearms	1
Traumatism by cutting or piercing instruments	8
Traumatism by other crushings	3
Sprain	3
Fractures	11
Other external violence	10
No disease	9
Total	846

## SURGICAL OPERATIONS.

Amputation of leg	2
Amputation of digits, multiple	2
Adenectomy, cervical	1
Adenectomy, inguinal, single	3
Herniotomy, inguinal, single	4
Herniotomy, inguinal, double	1
Herniotomy, ventral	1
Herniotomy, strangulated	1
Varicocele, radical cure	2
Hydrocele, single, radical cure	2
Curetage uteri	8
Perineoplasty	1
Fistula in anus, excision of	3
Skin graft	4
Hemorrhoids, radical cure	4
Appendectomy	2
Appendectomy, with local peritonitis	2
Pan hysterectomy	1
Supravaginal hysterectomy	5
Salpingectomy, single	2
Salpingectomy, double	3
Salpingo-oophorectomy	3

TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.

## SURGICAL OPERATIONS—Continued.

Ovarian cystectomy.....	1
Suspensio-uteri.....	7
Gunshot wound of abdomen.....	1
Major operations, various other.....	4
Minor operations, various other.....	63
Total.....	133

TABLE XVII.—SUMMARY OF SANITARY WORK PERFORMED AND MATERIAL EXPENDED IN THE CANAL ZONE.

Work requests on supply department:	
Grass cutting.....	40
Screening.....	6
Miscellaneous.....	8
Work requests on municipal engineering department.....	16
Work requests on other departments.....	2
Notices served to abate nuisances.....	1
Arrests and convictions.....	1
Buildings inspected: -	
For screening.....	1,639
For mosquitoes.....	5,221
For general sanitation.....	2,247
Stores, inspections of.....	24
Restaurants, inspections of.....	12
Shops, inspections of.....	32
Pit closets, inspections of.....	554
Closets disinfected.....	634
Garbage cans emptied.....	2,862
Houses disinfected and fumigated.....	5
Rat traps in use.....	471
Rats destroyed.....	531
Number of mosquitoes destroyed in dwellings:	
Anopheles.....	1,785
Stegomyia.....	96
Culex.....	14,822
Mansonia.....	16,767
Wyeomyia.....	23
Number of containers with Stegomyia larvæ found.....	1
Fly-breeding places destroyed.....	5
Material expended:	
Crude oil, gallons.....	17,135
Larvacide, gallons.....	561
Kerosene, gallons.....	653

## ROUTINE WORK DONE BY HEALTH OFFICE, PANAMA.

General sanitation:	
Linear feet of ditches cleaned and maintained.....	30,740
Linear feet of new ditches dug.....	2,242
Number of cubic yards of earth used in filling.....	0
Gallons of larvacide used.....	300
Gallons of crude oil used.....	4,745
Gallons of kerosene used.....	224
Square yards of pools oiled.....	380,135
Water containers treated.....	13,815
Mosquito-breeding places found (stegomyia 134).....	281
Fly-breeding places found.....	41
Flies trapped (13,000 per quart).....	quarts.. 41
Number of rats killed.....	1,143
Number of room disinfections made.....	13
Square feet of vegetation removed.....	385,250
Garbage collection:	
Number of loads of garbage removed to dump.....	5,563
Number of cubic yards of garbage removed to dump.....	9,211
Total number of cans garbage emptied.....	42,592

## Buildings:

Number of buildings inspected .....	4,561
Number of plans for new buildings approved .....	13
Number of permits issued for repairs to old buildings .....	101
Total building permits issued .....	114
Number of buildings condemned .....	31
Number of stables condemned .....	1
Number of buildings demolished .....	2

## Street cleaning:

Average number of square yards of streets cleaned daily .....	600,000
Average number of square yards of streets sprinkled daily .....	45,000
Number of private properties cleaned during month .....	0
Number of notices served and nuisances abated .....	470

## Vaccinations:

Number of vaccinations performed during month .....	17
Total number of vaccinations since Apr. 1, 1914 .....	24,880

## MONTHLY WORK REPORT FOR COLON, CRISTOBAL, AND MOUNT HOPE.

## Sanitation, Colon-Cristobal:

Square yards street cleaned .....	4,045,752
Square yards alleys maintained .....	676,000
Number of private properties cleaned .....	762
Cubic feet fumigated .....	88,000
Doses of quinine issued .....	5,583
Number of dogs killed .....	23
Number of rats caught .....	398
Loads of yard garbage disposed of .....	624
Number of cans of garbage (cubic yards, 2,525) .....	65,289
Colon dump maintained .....	
Linear yards of ditches constructed (cubic yards, 310½) .....	1,030
Linear yards of ditches maintained .....	1,305
Acres of vegetation removed—	
Colon .....	4½
Cristobal .....	5
Hotel Washington .....	3
Panama Railroad Reservation, Colon (swamp) .....	35
Parkway and East Street maintained .....	0
Square yards oiled .....	44,750
Number of receptacles treated .....	36,652
Number of mosquitoes caught in Colon Hospital screens—	
Anopheles .....	30
Culex .....	1,345
Number of mosquito-breeding places destroyed .....	2
Number of fly breeding places destroyed .....	
Number of buildings inspected .....	10,220
Number of gallons of Larvacide used in Colon .....	123.25
Number of gallons of crude oil used in Colon .....	775
Number of nuisances abated .....	316

## Building, Colon:

Number of building plans approved .....	13
Number of permits to occupy issued .....	9
Number of permits to repair issued .....	41
Number of bills collected .....	149

## Sewers, Colon:

Number of new connections made during the month .....	9
Total number of connections made to date .....	1,347
Number of houses on which connections were made .....	4
Outstanding permits .....	35

## Sanitation, Cristobal:

Number of cans garbage (cubic yards, 902) .....	14,245
Loads of yard garbage handled .....	217
Square yards oiled .....	10,125
Number of receptacles treated .....	7,500
Number of mosquito breeding places destroyed .....	0
Number of fly breeding places destroyed .....	0
Gallons of Larvacide used .....	10
Gallons of crude oil used .....	225
Number of buildings inspected .....	1,520
Number of nuisances abated .....	69

## Sanitation, Mount Hope:

Number of cans garbage (cubic yards 109).....	963
Square yards oiled.....	159,500
Number of doses of quinine issued.....	650
Number of receptacles treated.....	13,650
Number of mosquito places destroyed.....	209
Number of mosquitoes caught in barracks—	
Anopheles.....	42
Culex.....	3,334
Number of mosquitoes caught in silver married quarters—	
Anopheles.....	3
Culex.....	1,341
Number of mosquitoes caught in steamships—Culex.....	476
Number of mosquitoes caught in Mount Hope village—	
Anopheles.....	578
Culex.....	523
Number of mosquitoes caught in Camp Blerd cars—	
Anopheles.....	61
Culex.....	396
Total anopheles.....	684
Total culex.....	6,070
Gallons of Larvacide used.....	100
Gallons of crude oil used.....	4,156.54
Mount Hope Cemetery maintained.....	
Linear yards ditches constructed.....	3,339
Linear yards ditches maintained.....	9,706
Square yards of vegetation removed.....	248,170
Number of burials during the month.....	49

TABLE XVIII.—CONSOLIDATED REPORT OF QUARANTINE TRANSACTIONS AT THE PORTS OF BALBOA-PANAMA AND COLON-CRISTOBAL.

Number of vessels inspected and passed.....	216
Number of vessels held in quarantine.....	15
Total number of vessels entered.....	231
Number of special inspections made to enforce compliance with anti-plague and mosquito-breeding regulations.....	105
Number of vessels fumigated on arrival.....	16
Number of vessels detained but sailed in quarantine.....	6
Number of crew examined.....	12,590
Number of passengers examined.....	3,887
	16,477
Number of supplementary inspections.....	1,555
Number of persons vaccinated at port of arrival because of compulsory vaccination law.....	285
Number of persons vaccinated at port of departure or en route because of compulsory vaccination law.....	1,037
	1,322
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	270
Number of poliomyelitis suspects detained.....	24
Number of persons held in quarantine on board vessels.....	1,449
	1,743
Total number of persons landed from foreign ports:	
Cabin.....	1,896
Steerage.....	1,245
	3,141

Total number of persons embarked for foreign ports:	
Cabin.....	1,768
Steerage.....	1,738
	<u>3,506</u>
Total number of persons arriving from coast towns on small launches and sailing craft.....	
	1,757
Total number of persons sailing for coast towns on small launches and sailing craft.....	
	1,638
Apparent increase for month from coast towns.....	
	119
Apparent decrease for month from foreign ports:	
Cabin (increase).....	128
Steerage (decrease).....	493
	<u>365</u>
Number of clearances issued.....	
	64
Number of bills of health issued or viséed.....	
	232
Number of inspections of docks.....	
	10
Number of immigrants rejected and deported.....	
	29
Total number of persons landed.....	
	4,898
Less number for Pacific ports.....	
	239
	<u>4,659</u>
Total number of persons sailing.....	
	5,144
Apparent decrease for month.....	
	485

## IMMIGRATION REPORT FOR COLON AND CRISTOBAL.

From—	Cabin.	Steerage.
Europe.....	15	14
United States.....	768	67
Jamaica and West Indies.....	58	162
Venezuela.....	14	2
Colombia.....	89	113
Cuba.....	26	18
Costa Rica.....	108	21
Bocas del Toro.....	52	119
Coast towns.....	0	148
	<u>1,130</u>	<u>664</u>

Grand total.....	1,794
Men.....	819
Women.....	511
Children.....	262
United States Navy.....	54
Unclassified.....	148
	<u>1,794</u>

## QUARANTINE TRANSACTIONS AT PORT OF BOCAS DEL TORO.

Number of vessels inspected and passed.....	19
Number of crew inspected and passed.....	1,363
Number of passengers inspected and passed.....	222
Number of passengers, transit, inspected and passed.....	97

No quarantinable disease has appeared in this port, and the health conditions of the port and surrounding territory are good.

## TABLE XIX.—STATEMENT OF QUININE ISSUED.

Quinine sulphate (kilos).....	31.00
Pounds avoirdupois.....	68.34

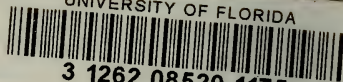
TABLE XX.—PERSONNEL REPORT.

	September, 1916.			August, 1916.	Septem- ber, 1915.
	Gold em- ployees.	Silver em- ployees.	Total em- ployees.	Total em- ployees.	Total em- ployees.
Chief health officer.....	5	-----	5	5	4
Medical storehouse.....	4	4	8	8	7
Quarantine division.....	12	34	46	49	43
Health office, Panama.....	11	148	159	163	174
Health office, Colon—Mount Hope.....	9	157	166	184	187
Ancon Hospital.....	123	242	365	375	334
Colon Hospital.....	17	25	42	40	37
Santo Tomas Hospital.....	6	-----	6	6	5
Palo Seco Leper Asylum.....	2	35	37	40	31
Zone sanitation.....	7	119	126	139	135
Hospital farm.....	2	63	65	65	50
Dispensaries:					
Balboa.....	5	3	8	8	6
Corozal.....	-----	-----	-----	-----	4
Gamboa.....	2	-----	2	2	1
Gatun.....	2	2	4	4	4
Naos Island.....	-----	-----	-----	-----	1
Paraiso.....	2	2	4	4	4
Pedro Miguel.....	2	1	3	4	3
Total.....	211	835	1,046	1,096	1,030





UNIVERSITY OF FLORIDA



3 1262 08520 1175